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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,994	12/31/2001	Yung-Chiang Chung	64.600-093	9619
7590 02/20/2004			EXAMINER	
TUNG & ASSOCIATES			DRODGE, JOSEPH W	
Suite 120 838 W. Long Lake Road			ART UNIT	PAPER NUMBER
Bloomfield Hills, MI 48302			1723	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary The MAILING DATE of this communication appears on the cover shoot with the correspondence address			Application No.	Applicant(s)				
Joseph W. Drodge	•		10/038,994	CHUNG ET AL.				
Period for Reply A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE g MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. Edunations of time may be welled in until the provisions of 37 CFR 1.15(g), bit no event, horacref, may a reply be firrely that until SX (6) MONTHS from the mailing date of this communication of the provision of th		Office Action Summary	Examiner	Art Unit				
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1) ⊠ Responsive to communication(s) filed on December 10, 2004. 2a) ☑ This action is FINAL. 2b ☐ This action is non-final. 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) ☑ Claim(s) 1-8 is/are pending in the application. 4a) Of the above claim(s) is/are withdrawn from consideration. 5) ☐ Claim(s) is/are allowed. 6) ☑ Claim(s) is/are allowed. 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction and/or election requirement. Application Papers 9) ☐ The specification is objected to by the Examiner. 10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152. Priority under 35 U.S.C. § 119 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) ☐ All b) ☐ Some * c) ☐ None of: 1. ☐ Certified copies of the priority documents have been received in Application No 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. Attachment(s) 1) ☐ Notice of Proferences Cited (PTO-1892) 2) ☐ Notice of Conferences Cited (PTO-1892) 3) ☐ International Paperau (PTO-1419) Paper Note)/Mail Date 9per Note)/Mail D	THE I - Exter after - If the - If NO - Failu	MAILING DATE OF THIS COMMUNICATION. Insigns of time may be available under the provisions of 37 CFR 1.1 SIX (6) MONTHS from the mailing date of this communication. In period for reply specified above is less than thirty (30) days, a replay period for reply is specified above, the maximum statutory period are to reply within the set or extended period for reply will, by statute reply received by the Office later than three months after the mailing	36(a). In no event, however, may a reply be to within the statutory minimum of thirty (30) downwill apply and will expire SIX (6) MONTHS from cause the application to become ABANDON	imely filed ays will be considered timely. m the mailing date of this communication. IED (35 U.S.C. § 133).				
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Application/Control Number: 10/038,994

Art Unit: 1723

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Vanden Bussche et al patent 6,655,829.

Vanden Bussche et al disclose operation of a microfluidic mixer (columns 2, lines 18-20, etc.) a plurality of channels (10,10',12-shown particularly in figure 3) terminating radially and obliquely into aperture (14,14') to effect a swirling mixing within the aperture ('mixing chamber), (column 2, lines 15-64, the mixing action within the aperture/mixing chamber is particularly described as forming a tangential, spiraling and vortex formation within the chamber in column 7, lines 15-17 and 59-64.

Regarding claims 2 and 6, see centered outlet port 19' in figure 3 and description of cover plate or cover layer in column 10, lines 49-54, etc.

Regarding claims 3 and 7, materials of construction are disclosed at column 10, lines 61-65 and column 12, lines 46-48.

Regarding claims 4 and 8, varied shapes of aperture/mixing chamber are discussed at column 7, lines 18-20 and elsewhere.

Applicant's arguments with respect to claims 1-8 have been considered but are most in view of the new ground(s) of rejection.

Application/Control Number: 10/038,994

Art Unit: 1723

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Drodge at telephone number 571-272-1140. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can reached at 571-272-1151. The fax phone number for the examining group where this application is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information

Application/Control Number: 10/038,994

Art Unit: 1723

for published applications may be obtained from either private PAIR or Public PAIR, and through Private PAIR only for unpublished applications. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWD

February 9, 2004

JOSEPH DRODGE PRIMARY EXAMINER